The Hurdles Analysis
A method to identify and analyse hurdles for green procurement in municipalities

von
Edeltraud Günther / Lilly Scheibe
The Hurdles Analysis
A method to identify and analyse hurdles for green procurement in municipalities

Table of content

Table of figures............................................................................................................................III

0 Introduction - the aim of the hurdles analysis .................................................................1

1 The hurdles analysis method ..........................................................................................1

1.1 Public procurement - a decision-oriented view...........................................................1
  1.1.1 Elements of the decision process.........................................................................1

1.2 Analysis of the decision process................................................................................3
  1.2.1 Targets in public administration ........................................................................4
  1.2.2 The potential of green procurement in municipalities.......................................4
  1.2.3 Public procurement as a special decision process .............................................5
    1.2.3.1 The procurement process..........................................................................5
    1.2.3.2 The actors within public procurement......................................................6

2 Hurdles in public procurement ....................................................................................7

2.1 Hurdle effects in public administration.....................................................................8
  2.1.1 Effects due to the number of involved actors or departments.........................8
    2.1.1.1 Complexity effect ....................................................................................8
    2.1.1.2 Centralization effect ..............................................................................9
  2.1.2 Effects due to the interaction between the involved actors or departments ....9
    2.1.2.1 Demarcation effect ...............................................................................9
    2.1.2.2 Power effect.........................................................................................10
  2.1.3 Effects due to the involved actors or departments.............................................10
    2.1.3.1 Routine effect .......................................................................................10
    2.1.3.2 Commitment effect ..............................................................................10

2.2 Hurdles in Green Public Procurement ..................................................................11

2.3 Relevance of hurdles..............................................................................................12
  2.3.1 Real versus perceived hurdles ........................................................................12
  2.3.2 Sequence of hurdles.......................................................................................12

3 The approach of the hurdles analysis .......................................................................13

3.1 Hurdles catalogue of green procurement ............................................................13

3.2 Definition of the actors/departments to be involved in the hurdles analysis .......14

3.3 Assessing hurdles by a standardized questionnaire .......................................14
  3.3.1 The standardized questionnaire .................................................................14
3.3.2 The assessment of the perceived hurdles ...............................................................15

3.4 Analysing assessed hurdles by a structured interview .............................................18

4 The development of the method from the first implementation to the self-evaluation tool .........................................................................................................................................18

4.1 Analysis of the results of the hurdles analysis within the RELIEF project............19
  4.1.1 The development of the method (theoretically) ....................................................19
  4.1.2 First results of the hurdles analysis ....................................................................20
      4.1.2.1 Analysis of the relevance of hurdles in the Municipality A .........................20
      4.1.2.2 Analysis of the relevance of hurdles in the Municipality B .........................23
      4.1.2.3 Analysis of the relevance of hurdles in the Municipality C .........................26
  4.1.3 Cognitions from the first application ................................................................29

4.2 The case study in the project NaBesI ..................................................................29
  4.2.1 The further development of the method (theoretically) ....................................29
  4.2.2 Results of that case study like hurdles analysis (Analysis in the Municipality D)29

4.3 Further progress ......................................................................................................32

4.4 Cognitions from working with the hurdles analysis .............................................33

5 The self-evaluation tool for municipalities .................................................................33

  5.1 Concept ................................................................................................................33
  5.2 The online questionnaire .....................................................................................35
  5.3 Cognitions from developing the self-evaluation tool .............................................36

6 Reflection and perspectives .........................................................................................36

7 Appendix ....................................................................................................................38

  7.1 Overview over existing eCommerce platforms for procurement as well as possible information sources concerning green procurement ........................................38
  7.2 Questionnaire for assessing hurdles in the procurement process in municipalities .....................................................................................................................................38

8 References ..................................................................................................................42
Table of figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>decision process</td>
</tr>
<tr>
<td>2</td>
<td>decision pyramid</td>
</tr>
<tr>
<td>3</td>
<td>procurement process</td>
</tr>
<tr>
<td>4</td>
<td>actors in a procurement decision</td>
</tr>
<tr>
<td>5</td>
<td>factors affecting purchasing Centralization/Decentralization</td>
</tr>
<tr>
<td>6</td>
<td>potential hurdles for green procurement</td>
</tr>
<tr>
<td>7</td>
<td>current hurdles matrix</td>
</tr>
<tr>
<td>8</td>
<td>hurdles profile of a municipality</td>
</tr>
<tr>
<td>9</td>
<td>hurdles portfolio of a municipality</td>
</tr>
<tr>
<td>10</td>
<td>hurdles matrix of a municipality</td>
</tr>
<tr>
<td>11</td>
<td>first hurdles catalogue - list of potential hurdles for green procurement</td>
</tr>
<tr>
<td>12</td>
<td>prototype I of the hurdles matrix</td>
</tr>
<tr>
<td>13</td>
<td>hurdles profile for Municipality A</td>
</tr>
<tr>
<td>14</td>
<td>hurdles matrix for Municipality A</td>
</tr>
<tr>
<td>15</td>
<td>hurdles matrix for Municipality A – matching the hurdles to the decision process and the actors within it</td>
</tr>
<tr>
<td>16</td>
<td>hurdles profile for Municipality B</td>
</tr>
<tr>
<td>17</td>
<td>hurdles matrix for Municipality B</td>
</tr>
<tr>
<td>18</td>
<td>hurdles matrix for Municipality B – matching the hurdles to the decision process and the actors within it</td>
</tr>
<tr>
<td>19</td>
<td>hurdles profile for Municipality C</td>
</tr>
<tr>
<td>20</td>
<td>hurdles matrix for Municipality C</td>
</tr>
<tr>
<td>21</td>
<td>hurdles matrix for Municipality C – matching the hurdles to the decision process and the actors within it</td>
</tr>
<tr>
<td>22</td>
<td>hurdles profile for Municipality D</td>
</tr>
<tr>
<td>23</td>
<td>hurdles matrix for Municipality D</td>
</tr>
<tr>
<td>24</td>
<td>hurdles matrix for Municipality D – matching the hurdles to the decision process and the actors within it</td>
</tr>
<tr>
<td>25</td>
<td>prototype II of the hurdles matrix</td>
</tr>
<tr>
<td>26</td>
<td>Steps of the self-evaluation</td>
</tr>
<tr>
<td>27</td>
<td>Registration for the hurdles analysis self-evaluation</td>
</tr>
<tr>
<td>28</td>
<td>Application for the hurdles analysis self-evaluation</td>
</tr>
<tr>
<td>29</td>
<td>The hurdles web</td>
</tr>
<tr>
<td>30</td>
<td>eCommerce platforms and information sources</td>
</tr>
</tbody>
</table>
0 Introduction - the aim of the hurdles analysis

Public procurement amounts to approximately 12% of the gross domestic product of industrialized countries. The greatest part of it is controlled by municipalities. Consequently, their procurement decisions have an enormous potential to initiate and support sustainable development. But measures that have been taken so far did not have a substantial impact on production processes and products yet. This was the starting point for heading toward one of the objectives of the European research project RELIEF\(^1\) (Environmental Relief Potential of Urban Action on Avoidance and Detoxification of Waste Streams through Green Public Procurement): to identify existing hurdles for green public procurement and to develop strategies for overcoming those hurdles. For this a decision-oriented view on public procurement was chosen, possible hurdles, revealed in practice, were identified with the help of a therefore developed questionnaire and their relevance for the cities participating in the RELIEF project was examined. Thus the concept of the hurdles analysis was developed. Subsequently the method was improved by expanding the questioning on other European municipalities than those taking part in the RELIEF project as well as using it within the German research project NaBesI\(^2\) where a case study was accomplished. Based on the experiences and outcomes of these first hurdles analyses a self-evaluation tool was developed. It shall enable municipalities to assess their hurdles for green procurement and deduce strategies on their own.

The first chapters of this paper describe the developed method of the hurdles analysis with its assumptions and restrictions especially owing to the fact of dealing with municipalities and their special characteristics (chapter 1 to 3). In the second part the development of the method is presented (chapter 4). The main section of this part attends to the design and the outcome of the hurdles analysis within the RELIEF project. This is followed by a short description of the further development of the method. The self-evaluation tool will be introduced in the third part (chapter 5). Finally a forecast is given (chapter 6).

1 The hurdles analysis method

1.1 Public procurement - a decision-oriented view

In order to come to decisions in public procurement as well as to implement and control them, decision makers pass through a decision process, consisting of different elements. Decision makers are not always aware of this process itself and its relevance.\(^3\) Hence, modelling the process can be an effective tool for making them aware of this process as well as analyzing and structuring possible hurdles alongside it and figure out ways to relief them.

1.1.1 Elements of the decision process

In general a decision can be defined as the process of preparing and coming to a decision as well as implementing and controlling it. A decision consists of different elements and their linkages.\(^4\)

---

\(^1\) For further information about this project please have a look at the project’s homepage: http://www.iclei.org/europe/eoprocura/relief/

\(^2\) NaBesI stands for “Nachhaltig Beschaffen - Potentiale Nachhaltiger Beschaffung und Instrumente zu ihrer Umsetzung”. This is a research project funded by the German Federal Ministry of Education and Research (BMBF). It is focusing on green public procurement and dealing with the question why it does not work until now. Therefore it surveys perceived hurdles as well as hurdles that really exist, e.g. because of the legal framework or missing green alternatives. For further information cf. www.tu-dresden.de/wwbwlforschung/laufende_projekte/nachhaltig_beschaffen/.


• **Identify targets**: The starting point of every decision is, that somebody discovers a gap between the current situation and a desired situation. From this gap the targets are derived for which the organization shall go. Those targets can be disclosed or hidden. There are two types of targets. First every organization or company pursues organizational targets (such as fulfillment of customer needs or financial strength). And second every person (actor in the decision process) reaches for individual targets (such as safety, career or personal environmental motivation). Individual and organizational targets must be balanced to reach identification. Therefore individual targets must be identified and organizational targets must be communicated (e.g. to use guidelines). The complexity has to be reduced and information must be processed systematically. A very powerful hurdle for green procurement in the element of setting the target would be the fact that nobody (neither the organization nor individual) sees a necessity to integrate environmental aspects in procurement, that means no gap is identified.

• **Search for alternatives**: After setting the target possible options for actions must be identified. Searching for alternatives can be very time consuming, especially if innovations have to be implemented. It also requires a high amount of creativity and the ability to separate the creative development of alternatives and the logical evaluation of those alternatives. One hurdle within this element might be that possible green alternatives are rejected very quickly because of a legal framework that is perceived to be very restrictive.

• **Decide on alternatives**: To come to a decision the chosen alternatives have to be evaluated. Several persons, the so-called decision makers, can be part of this decision process. They contribute their individual information and evaluation, based both on organizational and individual targets to the decision. Respecting the existing scenario (such as the legal framework) criteria for the decision-making have to be selected. Considering those criteria the optimal alternative is chosen in the end the decision is made. One hurdle in this area might be the lack of an integrated economic-ecological evaluation method.

• **Implement the decision**: After reaching an agreement the decision has to be realized. Planning implementation is a vital step in decision-making. A detailed program for the steps following the decision has to be developed. Measures to be taken must be described, responsibilities assessed, financial resources and deadlines fixed. The persons affected by the decision must be informed, integrated and motivated. The lack of clear responsibility fixing might be a hurdle in the implementation process.

---

8 Cf. ALTIER, W.J. (1999), pp. 79.
9 The environmental program as part of an Environmental Management System is giving practical hints how to do that. (Cf. EUROPÄISCHES PARLAMENT UND RAT DER EUROPÄISCHEN UNION (ED.) (2001))
• **Control the decision**: The effectiveness and efficiency of decisions have to be continuously checked (feedback). Ideally experiences should be fed forward to improve the decision process for every following decision (feedforward). To fulfil that task external assistance might be helpful. Especially if green procurement was started some time ago without the expected success, looking back can be very helpful.

### 1.2 Analysis of the decision process

Integrating environmental criteria in public procurement does not only mean to introduce a new decision parameter “environmental impact”, even if it is specified. Moreover the applied decision tools, the decision makers, the decision points and the decision targets have to adapt or to be adapted to the new strategy. This interplay of forces can be structured with the help of the following decision pyramid:

![Decision Pyramid](image)

**figure 2: decision pyramid**

- **Decision targets**: In order to classify decisions, a distinction between strategic and operational targets is helpful. Strategic targets ask for effectiveness: “Are we doing the right things?” (e.g. “Is green procurement the right way to save the environment?”) or on a more detailed level: “Are we focusing on the right issues (e.g. products or services) in green procurement?”). Operational targets ask for efficiency “Are we doing things right?” (e.g. “Is our organization optimal to pursue green procurement?” or on the more detailed level “Which criteria should we use to select environmentally friendly products?”). Both, effectiveness and efficiency are starting points for decisions.

- **Decision points**: The elements of a decision process follow a chronological order from the first idea to the implementation and control. In those elements different hierarchies (strategic and operational level), different functional units (e.g. finance, procurement, environment) and even other organizations (e.g. customers, suppliers, competitors) are involved. That means that every element of the decision process consists of an interplay of different actors with a different ability and willingness for green procurement.

- **Decision makers**: The decision points are characterized by the acting people influencing the decision-making. Their different role in hierarchies, functional units and organization may be one possible source for disturbances.

- **Decision tools**: In order to evaluate existing alternatives, both monetary and non-monetary instruments support the decision makers. Non-monetary instruments can be quantitative or qualitative.

---

11 The train of thoughts is following the idea of the stakeholder model developed by Freeman, see FREEMANN, R. E. (1984).
• **Decision parameters**: Decision tools use different parameters in terms of criteria and scenarios determining the institutional framework of the decision. In decision processes the selection of those parameters is crucial for the final decision. Nevertheless to choose the right parameters is a necessary, but not sufficient condition in decision-making.

### 1.2.1 Targets in public administration

Decision theory, like business administration in general is focusing more on private companies and less on public administration. Therefore existing instruments cannot be transferred without taking into consideration the differences. Especially the targets differ. In private companies strategic targets dominate operational targets, whereas in municipalities operational targets are superior. For example municipalities have to offer social services, even if there are financial constraints. One major feature is that public authorities aim at the public welfare. Therefore targets express mainly external interests, i.e. interests of the society. Even if the financial situation does not allow the fulfilment of that tasks, ways to do so have to be found. Moreover most of the targets cannot be assessed in a quantitative way, like e.g. the freedom of competition. And often there is no market for the services, such as e.g. issuing passports.

Targets of public authorities always depend on legal conditions. Moreover the citizens, the “customers” of the public administration are voters. In addition the economic and social situation influence the targets of public authorities. Exogenous targets are given from superior institutions, whereas endogenous targets are set by the institution itself. Green procurement for example can be both an exogenous and an endogenous target.

### 1.2.2 The potential of green procurement in municipalities

Due to their relatively high demand volume (about 12% of total GNP) the potentials of green procurement in municipalities are well known for many years. It therefore offers a big potential to take influence on e.g. sustainable production, closing material cycles and avoiding waste. Ecological oriented materials management for example has been an important field of work for a long time by now. Already in the 1980’s handbooks for practicing ecological oriented management have been published on that topic. Alongside institutions, governments, companies and municipalities, too, have been starting a number of initiatives to encourage green procurement over those last 20 years. Here only a few mainly German initiatives should be presented exemplarily:

- For more than 15 years the German Umweltbundesamt has been working on that topic. As a result this work flew in several guidelines concerning green procurement.
- Companies aiming on a validation within EMAS or on the certification of DIN EN ISO 14001 have to consider environmental aspects in procurement decisions.
- The German “Kreislaufwirtschafts- und Abfallgesetz” obligates companies to take responsibility for their products beyond the usage phase. To be able to fulfil this obligation it is strategically necessary to include environmental aspects of the product’s disposal already in the procurement decision.
- Already in 1996 the international city-network ICLEI has started the Eco-Procurement-Initiative. This initiative is based on four columns: the EcoProcura conference series, the EcoProcura magazine, the “Buy it green“-network for green procurers all over Europe (BIG-Net) and a number of projects with practical background.

---

17 § 4 Abs. 2 KrW/-AbfG says that measures to prevent waste are internal cycles for materials, low waste product designs as well as the consumer behaviour to purchase low waste and environmentally compatible products in particular.
18 ICLEI stands for “The International Council for Local Environmental Initiatives”. It is an international association of local governments implementing sustainable development. Its mission is to build and serve a worldwide movement of local governments to achieve tangible improvements in global environmental and sustainable development conditions through cumulative local actions. For further information see www.ic lei.org/.
• The German Bundesverband für Umweltberatung (bfub) developed a continuously revised webpage for procurers. In other countries there are similar initiatives for Greener Procurement, too, offering information, procurement checklists, eco labelling, etc.

• Alongside these efforts of government and NGO’s in view of the industry, trade and commerce attended to that topic either. The positioning paper “Sustainable development” of the Bundesarbeitgemeinschaft der Mittel- und Großbetriebe des Einzelhandels (BAG) may stand as an example.

• Furthermore ecological oriented trade associations established themselves which are also working on the topic of green procurement. In Germany for example the Bundesdeutsche Arbeitskreis für umweltbewusstes Management (B.A.U.M.), the Förderkreis Umwelt future as well as the Bundesverband Materialwirtschaft, Einkauf und Logistik (BME) as well as internationally the International Network for Environmental Management (INEM) exist.

• In the last years first initiatives and platforms in the new field of eCommerce have been developed to support and encourage green procurement either (green eBusiness). For a first overview over existing green eBusiness designs and over web pages concerning green procurement see figure 30: eCommerce platforms and information sources.

In Germany green procurement in general as well as green procurement in municipalities in special has a lower relevance in comparison to other European countries like the Scandinavian countries or Austria in spite of all these initiatives and efforts made. But even in those countries mentioned existing potentials for green purchasing are only insufficiently used. So the question is: What hinders green procurement in municipalities?

1.2.3 Public procurement as a special decision process

Procurement is not simply purchasing. “While procurement is generally regarded as the responsibility of the purchasing department, it is, in fact, a shared function in that all areas of management … are involved.” Even if that statement is already 25 years old, it is still true. And that property of being an overall task makes it important to see the unity of the process on the one hand and the involved actors on the other.

1.2.3.1 The procurement process

The procurement process of a municipality is a specialisation of the general decision process. It consists of a number of different elements corresponding to this process (see figure 1 as well as figure 3). Similarities as well as differences are explained in the following:
• **Demand Management**: This step corresponds to the identification of targets in the general decision process. Users needs (fulfilment of a function, such as lighting) and procurers targets (financial, legal, environmental or general) have to be coordinated. Moreover *individual* and *organizational targets* must be balanced. Local authorities pursue organizational targets like efficient use of resources or effective outcome. Every person reaches for individual targets. To avoid resistance from users and/or purchasers (especially according to environmental aspects of products and services) all actors should be involved in the proceedings. This way special resources such as individual knowledge can be used efficiently, too.

• **Market Research**: This step corresponds to the search for alternatives in the general decision process. On the one hand the market may offer more green products and services than actually known by procurers. On the other hand the market may not be ready to provide the desired range of green products and services. Therefore a market research must be executed. Possible *options for actions* have to be identified within this element. Signals can be sent to the market by demanding green products and using existing negotiation power.

• **Award**: This step corresponds to the decision on alternatives in the general decision process. Within the scope of the existing *scenario* (depending among others on the legal framework) *criteria* for the tender have to be set, alternatives to be collected and assessed. In the end one alternative is selected, the decision is made.\(^\text{27}\)

• **Procurement processing**: This step corresponds to the implementation of the decision in the general decision process. After concluding the agreement the decision has to be realized. Ideally experiences are fed forward to improve the procurement process continuously.

### 1.2.3.2 The actors within public procurement

Public procurement is a special decision process (see figure 1 and figure 3) based on public targets as illustrated earlier. In every element of this process different external stakeholders and decision-makers within a municipality are acting. Before the final procurement decision every actor along the decision process makes decisions that influence the process itself as well as its final result. Only by analyzing the multiple relations between politics and public administration, the view becomes comprehensive. The whole complex of political, strategic and operational activities is called the political-administrative system.\(^\text{28}\)

\(^{27}\) In the context of the RELIEF project an analysis of European law concerning public procurement was accomplished. Regarding the topic of possibly including environmental aspects in calls for tenders the analysis figured out that „It can be stated that green public procurement is certainly possible under the current EU procurement regime. As long as some basic principles concerning the functioning of the internal market and non-discrimination are being followed, it is mostly up to the discretion of the purchasing authorities to what extend environmental aspects are taken into account.” BARTH, R.; FISCHER, A. (2003), p. 67. To reach this conclusion the following aspects were analysed: the European procurement regime, the different stages in the procurement procedure (as there are the definition of the subject matter of the contract, technical specifications, award criteria and the execution of the contract) and the further developments of the regime, see BARTH, R.; FISCHER, A. (2003), p. 51-68.

Within the municipality the following departments play a major role:
- the procurement department or the different departments responsible for decentralised procurement of defined procurement objects,
- the environmental department,
- the finance department and
- the users within the municipality.

Each of those departments consists of actors on an operational level (Specialists = “Know-How promoters”\(^{29}\) that means persons promoting something by expertise) and a strategic level (Executives/Policitians = “Power promoters”\(^{30}\) that means persons promoting something by power). Moreover on the strategic level the political decision makers, e.g. the mayor influences the procurement process.

External stakeholders within the public procurement process are
- the state (country or EU) by composing laws, regulations and norms,
- the market by the provision of suitable products and determining prices and
- the citizens, using their influence, especially on the political decision makers by voting.

The following figure (see figure 4) shows the relation between the different decision-makers involved in public procurement.

\[\text{figure 4: actors in a procurement decision}\]

### 2 Hurdles in public procurement

Every element (step) of the decision process (see figure 3: procurement process) and every actor in it (see figure 4) can be a potential source for “disturbing factors”\(^{31}\) that may decelerate, hamper or even block green procurement. In the following those factors are called hurdles. On the one hand hurdles can occur within one step of the decision process (e.g. conflicts between organizational and individual targets) or between the steps (e.g. targets are not communicated clearly

\(^{29}\) **Know-How promoters** is meant by HAUSCHILD T; GEMÜN DEN as those persons who promote innovation processes by using their specific knowledge on the object in question actively and intensively, see HAUSCHILD T, J.; GEMÜN DEN, H. G. (1999), p. 17.

\(^{30}\) HAUSCHILD T; GEMÜN DEN use **Power promoters** for persons who promote innovation processes by using their hierarchic power potential actively and intensively, see HAUSCHILD T, J.; GEMÜN DEN, H. G. (1999), p. 16.

\(^{31}\) For “disturbing factors” cf. KAHLE, E. (1998), p. 159 - 206.; KIRCH, W. (1988), p. 122. Since the 1970’s the research team of WITTE; HAUSCHILD T; GEMÜN DEN analysed reasons for “disturbing factors” in decision processes. During their studies about promoters they identified a barrier of will and one of knowledge as cause that leads to the blocking of innovations, cf. HAUSCHILD T, J.; GEMÜN DEN, H. G. (1999), pp. 13. They defined barriers (hurdles) as hampering but conquerable hindrances, cf. HAUSCHILD T, J.; GEMÜN DEN, H. G. (1999), p. 13. Furthermore did they identify different key persons (actors) with certain characteristics (specific knowledge, power), who are capable of setting hurdles but as well as of removing them. The hurdles analysis within the procurement process shall make a contribution to the identification of such key persons in the municipalities to systematically working towards the improvement of green procurement and consequently relieve hurdles. A possibility for such a promotion is for example to increase the knowledge of the key persons by improving their information level about green product alternatives or to set incentives for green procurement.
and therefore the search for alternatives cannot consider them). On the other hand hurdles can be allocated to one department (e.g. the environmental department) or to the relation of several actors in several departments (e.g. environmental and finance department). If they occur within one step or are allocated to one department they can be called intra-elementary hurdles. If they occur between the different steps or affect actors in different departments they can be called inter-elementary hurdles. In our case, those hurdles avoid the consideration of environmental aspects in public procurement processes of a municipality. Therefore the targets of the hurdles analysis have to be:

- to identify and localize hurdles,
- to assess the relevance of these hurdles and
- to develop strategies to relieve the hurdles.

The existence of hurdles in decision processes has been known for a long time and therefore became an important scientific research field. That led to a multitude of approaches on this behalf dealing with the description and explanation of various possible hurdles.\(^{32}\) To implement green procurement it is necessary to know existing hurdles. For example a municipality can identify criteria to select environmentally friendly products, but if the users do not accept those products, the criteria list is of no use. The hurdles analysis shall meet the purpose to investigate starting points for a further implementation of green procurement in the public sector. Only if hurdles are managed proactively, the gap between the aimed targets and the level achieved so far can be bridged, i.e. the hurdles can be relieved. The relevant driving forces must be identified on the one hand and involved in improving the process on the other hand. It is absolutely possible that a hurdle is out of reach for a local authority. In such a case indirect measures such as lobbying have to be scrutinized.

Different biases (hurdle effects) can be responsible for the uprising of hurdles\(^{33}\) along the decision process. They describe the potential influence that conditions within a municipality might have on procurement decisions. In the following the so far identified hurdle effects are presented and described.

### 2.1 Hurdle effects in public administration

Complexity, centralization, demarcation, power, routines and commitment were identified as such hurdle effects. They can be allocated to the actors/departments described above. E.g. complexity and centralization determine the **number** of involved actors/departments in a procurement process. Demarcation and power are important for the **interaction** between the actors/departments (inter-elementary hurdles might arise here). Routine and commitment have an impact on the **processes within a department** (possible cause of intra-elementary hurdles).

#### 2.1.1 Effects due to the number of involved actors or departments

##### 2.1.1.1 Complexity effect

The complexity of the decision array influences the number of targets, their hierarchy, possible conflicts and the place where decisions are made. The more internal actors and external stakeholders (e.g. in the construction area) are involved, the more difficult it is to fix responsibility and to introduce innovations such as green procurement.\(^{34}\) High complexity of decisions in-

---


\(^{33}\) Cf. BAZERMAN, M. (1998) distinguishes as relevant biases in decision-making the availability heuristic (case of recall based on vividness and recency, retrievability based on memory structures and presumed assumptions), the representativeness heuristic (insensitivity to base rates, insensitivity to sample size, misconception of chance, regression to the mean and the conjunction fallacy) and biases from anchoring and adjustment (insufficient anchor adjustment, conjunctive and disjunctive events bias, overconfidence and the confirmation trap).

increases transaction costs. Therefore one side effect of high complexity is **sub-optimization**. Very often sub-processes are optimized simultaneously in different departments. The sum of those optimized sub-processes, however, may not result in an overall optimization. The high complexity, linked with a lack of transparency and communication as well as interferences are reasons for this sub-optimization. The size of a municipality provides an indication about the complexity of procurement decisions either. The smaller a municipality is, the leaner the procurement process can be organized. Less actors are involved and sometimes the different steps are executed by the same persons. The probability for information/communication hurdles is less.

### 2.1.1.2 Centralization effect

Public procurement can be organized within the organization both centralized and decentralized. The advantages and disadvantages of those different ways have to be assessed. COREY worked out some general statements about those advantages/disadvantages twenty five years past (see figure 5).

<table>
<thead>
<tr>
<th>Decentralization</th>
<th>Centralization</th>
</tr>
</thead>
<tbody>
<tr>
<td>High involvement of specific units in procurement decision-making</td>
<td>High commonality of use, ability to standardize</td>
</tr>
<tr>
<td>High need to mesh purchased-parts inflows with (production) schedules</td>
<td>Concern for long-term supply availability, high corporate commitment levels</td>
</tr>
<tr>
<td>High need for local service for small quantities with unpredictable usage patterns</td>
<td>High need for bargaining power to secure supplies and negotiation prices</td>
</tr>
<tr>
<td>User-unique requirements</td>
<td>Political sensitivity</td>
</tr>
<tr>
<td>Significant customer influence over sourcing strategies and supplier selection</td>
<td>High procurement staffing requirements, high need for specialized purchasing skills and knowledge</td>
</tr>
</tbody>
</table>

*figure 5: factors affecting purchasing Centralization/Decentralization*


### 2.1.2 Effects due to the interaction between the involved actors or departments

#### 2.1.2.1 Demarcation effect

*Demarcation of tasks and competencies*. Municipal parliaments and municipal administrations are directly related to decision processes. Municipal parliaments represent the interests of the citizens. They set targets and principles, control the execution of decisions and have to remove shortcomings. Therefore they are responsible for strategic tasks, such as planning, control, decision-making and representation of the citizens. Municipal administrations are responsible for operational tasks, i.e. for transferring the decisions of the parliament and executing municipal tasks. Nevertheless an efficient demarcation of tasks and competencies between politics and administration does not exist. Often a mayor is politician and at the same time head of a department. Moreover the decisions are prepared within the administration. That means that the alternatives are selected within the administration, whereas the politicians select one of those alternatives. So the decision process may not be necessarily ideal: On the one hand there may be a lack of political and strategic targets for the administration. On the other hand politicians may concentrate too much on details, that means on efficiency and not on effectiveness.
Demarcation of time. Moreover the responsibility for a certain time span has to be assessed. The economic calculation system of a municipality might not be designed for taking into consideration long-term expenses, as the budget must be balanced in short-term. Nevertheless today’s decisions influence the economic situation of tomorrow.

2.1.2.2 Power effect

Within the municipality as well as in relation to external partners, the relative negotiation power can be a restriction for environmental innovations. Power can be created by knowledge, but also the size of a municipality is relevant for the relative power of every actor in a procurement process.

2.1.3 Effects due to the involved actors or departments

2.1.3.1 Routine effect

Objective legal criteria are very important in public procurement. Together with the fact, that the processes are repeated often, public procurement is a classical example for routines. Routine characterizes a decision with limited alternatives. Two types of routine can be distinguished:

- Organizational routines are activities, that follow the same scheme because of organizational and legal defaults and
- Individual routines, mean that every person fulfilling a task has own routines that represent his or her personal values and preferences.

Routines can become as determining as legal conditions. An example for such an effect is the phenomenon, that the advertised bidding, supposed to be the standard in Germany, is avoided regularly. Routines get even more important if changes occur. Whenever the actual situation does not reflect the targets the existing gap has to be bridged. Therefore changes are necessary. Whether the actor is willing to accept the target situation depends on the related incentives and shortcomings. Whenever individual targets correspond with the situation strived for, the willingness to change is rather big. Vice versa if both targets are contrary, actors stick to their routines (organizational as well as individual) and the change is most likely not that easy to accomplish.

2.1.3.2 Commitment effect

The attitude of a person in a higher official position has a certain impact on decision processes. A lack of commitment (e.g. for green procurement) on the strategic level may end up in an insecurity of the people, acting on the operational level. That is why it is useful to focus on the individual actor and to take into consideration his/her institutional role on the one hand as well as the scope of actions possible for this role and the usage of that scope on the other. Nonetheless every employee or small administration unit influences the decision based on the following criteria:

- Knowledge (know how to do things)
- Ability (is able to do things)
- Willingness or Motivation (wants to do things)
- Permission (is allowed to do things)

The level of occurrence of those criteria depends on the actor himself and his individual targets, such as power, personal income, prestige, safety, comfort. Loyalty or pride influence decision-making, too. Of course the existing conditions can influence those individual targets positively as well as negatively. And therefore it is worth looking at the possibility of affecting those targets in

a municipal administration. All four criteria can be influenced. Knowledge can be taught, ability can be trained, incentives (reward/punishment) can create motivation and clear guidelines can result in a permission.

So commitment can be increased by influencing individual targets on all administrational levels.

2.2 Hurdles in Green Public Procurement

The hurdle effects described above are the reasons for different group of hurdles for green procurement. Hurdles can be caused by one or several of the effects mentioned above and can be structured as follows (see figure 6 either):

- no aims
- no regulations
- no knowledge
- no information
- no incentive and sanction system.\(^{44}\)

On the basis of theoretical analyses\(^{45}\) on the topic of hurdles as “disturbing factors“ and with the assumption that those “disturbing factors“ can appear in every element of the procurement process and can be caused by every actor within this process a first scheme for a hurdles matrix was developed (therefore see figure 7) following the structure of actors/departments and the decision process in public procurement. The hurdles catalogue shows the potential diversity of hurdles and classifies them due to the actors/departments and their occurrence within the decision process. Each of those hurdles is based on one or more of the hurdle effects described earlier and can be matched to one hurdles group (see figure 6).

---


\(^{45}\) These analyses include investigations of existing surveys on the topic of procurement, cf. GETZINGER, G. ET AL. (1990); GETZINGER, G. ET AL. (1991); SCHAPFER, M.; WOLLMANN, H. (1989); WALDMANN, A.; SEIFRIED, D. (2000); ZIMMERMANN, M.; WELTE, C. (1992A); ZIMMERMANN, M.; WELTE, C. (1992B)., as well as investigations on the topic of theories about decision-making, the inclusion of the theory of promoters by HAUSCHILD; GEMÜNDEN and the theory of the basis of power by FRENCH; RAVEN.
Whenever searching for perceived hurdles it is not only relevant to assess the current state, but also to identify, assess, record and discuss them. That’s why in this part of the analysis we focus on perceived hurdles.

### 2.3 Relevance of hurdles

One of the targets of the hurdles analysis is to develop strategies to overcome the identified hurdles. Therefore the relevance of the hurdles has to be assessed. In order to evaluate the outcome of this analysis the following distinctions of hurdles have to be kept in mind.

#### 2.3.1 Real versus perceived hurdles

If actors mention that no green product alternatives exist or the legal situation hinders green procurement, that can be characterized as a perceived hurdle, because the actor sees it as one. For him/her it is a hurdle. That doesn’t mean it to be a real one either as on the one hand the legal situation can really cause problems but on the other the actor may just not know the existing laws well enough. Real hurdles can be found by analysing the legal situation or the market. Perceived hurdles can be assessed by asking the relevant actors in the decision process. Questionnaires and interviews always bear the disadvantage of biases due to the subjective view. With both only perceived hurdles can be identified. As perceptions influence decisions, it is very important to identify, assess, record and discuss them. That’s why in this part of the analysis we focus on perceived hurdles.

#### 2.3.2 Sequence of hurdles

Whenever searching for perceived hurdles it is not only relevant to assess the current state, but also to figure out those hurdles, that are already overcome or that never existed. Those relieved gaps are an ideal starting point for a best practice sharing with other municipalities. By analysing failures a problem analysis can help to avoid the same results for the future. Moreover hurdles should not be analysed for past events only, but also be integrated in future planning. Part of the future situation can be planned by decision-making, part of it depends on the opportunities and threats, caused by external stakeholders.

---

**Figure 7: current hurdles matrix**

In order to develop strategies to relieve the hurdles, they were matched to the decision process as well as the actors/departments involved in the decision-making. This matching is only a suggestion as the structure is different in every municipality. So the suggestion has to be adapted to the particular situation.
The aim of the development of the hurdles analysis method is to allow municipalities to assess their hurdles on their own. Consultants are not necessary to assist a municipality in applying the tool, but they might be helpful to bring in an external, sometimes more neutral perspective.

The hurdles analysis method as developed for the RELIEF project and refined later on can be divided into the following steps:

1. Setting up a hurdles catalogue of green procurement (see figure 7: current hurdles matrix)
2. Defining the actors/departments involved in (green) procurement
3. Assessing hurdles by a standardized questionnaire
4. Analysing assessed hurdles by a structured interview

3.1 Hurdles catalogue of green procurement

From the potential hurdles identified within the hurdles matrix the following questions about perceived hurdles were deduced:

- Efforts for green procurement are useful.
- I am sufficiently informed about the aim of green procurement.
- Green procurement is one of the aims of my municipality.
  if you (rather) agree:
  Is this aim fixed in guidelines for green procurement?
  □ Yes □ No □ I don’t know
- The procurement guidelines of my municipality support green procurement.
- Given possibilities to include environmental criteria are widely used in my municipality.
- There are different views at several decision levels of my municipality concerning green procurement.
- There are uncertainties concerning the legal position of green procurement.
- The applicable law concerning green procurement is very complex.
- The existing legal framework prevents green procurement.
- I am informed about the environmental relevance of products and services.
- I am informed about the possibilities of green procurement.
- I am informed about green product and service alternatives.
- It is difficult to identify green products and services within the procurement market.
- Many users have prejudices concerning green product and service alternatives.
- Green procurement is obstructed by the administration processes (e.g. due to spread competences).
- Follow-up costs (e.g. energy or disposal costs) are not included in procurement decisions.
- Green products have a lower functionality compared to conventional products.
- Higher demand for green product and service alternatives by users within the municipality is a premise for more green procurement.
- Green products and services are too expensive.
- Green procurement causes additional work.
- Green procurement opens up opportunities for cost savings.
Green procurement causes cost increases.
There are sufficient possibilities for green procurement in my municipality.
There are sufficient green product and service alternatives available within the procurement market.
For further implementation it is important to extend given scope for green procurement.
For further implementation it is important to use the given scope in a better way.

3.2 Definition of the actors/departments to be involved in the hurdles analysis

In general the following sources are available to gain knowledge about the hurdles in the decision-making process of green procurement:

- the knowledge and experiences of the actors involved and
- studies, reports and other materials of the communities.

According to the idea that the procurement of products and services is a result of a complex decision-making process the hurdles are analysed from different points of view within the organizational structure of a municipality. Potential participants for a hurdles analysis are all persons who participate in the procurement process. To analyse this multi-actor process of public procurement correctly the selected actors however have to represent the internal driving forces:

1. on the strategic level:
   - political decision makers,
   - executives as administrative decision makers, i.e. heads of the involved departments,

2. on the operational level
   - specialists of the involved departments.

The selection of the actors and their (limited) number have a side-effect of some limitations for the interpretation. Depending on the number of participants in an analysis and therefore due to the (limited) insight into the partly very complex interplay of actors the picture of hurdles can not be absolute and representative. Nevertheless the combination of the gathered information and the assessing methodologies gives a meaningful picture on the decision-making process regarding green procurement and therewith related hurdles. The analysis does not cover external conditions like market and legal conditions, but includes the perception of the participants on these fields. It is a starting point for discussions within the municipalities.

3.3 Assessing hurdles by a standardized questionnaire

3.3.1 The standardized questionnaire

To get an overview over the personal perspectives and the perception of the actors in a municipality on their procurement process and the existing hurdles within it, a standardized questionnaire was developed. This questionnaire must be filled in by each participant of the hurdles analysis in a municipality.

Following the purpose to identify hurdles and match them to the decision process as well as to the actors/departments themselves the questionnaire consisted of two main fields.46

1. Questions on the decision-making process of procurement as a multi-actor process to get knowledge about the following parameters:
   - the function of the interview partner,
   - the influence to implement green procurement,
   - efforts to implement green procurement,

2. Questions to assess the perceived relevance of potential hurdles summarized in the hurdles matrix.

---

46 The current questionnaire can be found in the appendix, chapter 7.2, pp. 38.
3.3.2 The assessment of the perceived hurdles

The answers concerning the potential hurdles summarized in the hurdles matrix are used:

- to rank the hurdles by average relevance perceived and
- to analyse the spread and deviation of the perceived relevance.

There are several methods available to analyse the parts of the questionnaire regarding the perceived hurdles and therewith to identify and assess those hurdles.

The first step towards assessing hurdles is a classification due to their average relevance by grouping them in three categories:

- **red**: perceived to be a strong hurdle. The average perception of the hurdle is above the “I rather agree”-line.
- **yellow**: perceived to be a minor hurdle or already partially overcome. The average perception of the hurdles is between the “I rather agree”-line and the “I rather do not agree”-line.
- **green**: perceived to be no hurdle or already overcome. The average perception of the hurdles is below the “I rather do not agree”-line.

It is recommended to the municipalities to relieve the hurdles following the order of their relevance. It might make sense however not to stick to strongly to the order, but to follow the stages of the decision process. Hurdles concerning the scenarios (e.g. legal framework) can not be relieved directly by the municipality, except the perception does not reflect reality and increasing the information level of the employees would lessen this hurdle.

In a second step in order to develop ways to overcome the hurdles the municipalities might go on with answering the following questions:

- **Which hurdles are already relieved?** If one hurdle is perceived not to exist, two interpretations are possible: The hurdle never existed or the hurdle is already relieved. In the first case, the reasons have to be found. In the second case that municipality can be an excellent example for other municipality (Best Practice Sharing).

- **Were the answers rather homogeneous?** This question is very important for the yellow hurdles. Some answers might be “I do agree” and others “I do not agree”. In that case for example an information hurdle might be responsible for the spread. Those differences have to be analyzed in order to be able to overcome hurdles. They can also be seen as an indicator for expected resistance (Problem Analysis).

- **Is the hurdle real** (e.g. no product alternatives existing) or **perceived by some actors** (e.g. product alternatives exist, but some actors do not know them)? Based on this analysis decisions for the internal overcoming of the hurdles have to be initiated and pursued (Decision Analysis).

- **Can the hurdle be overcome by the municipality?** For example a municipality might not have enough negotiation power to influence the market or legislation. Municipalities initiating a (buying) syndicate can strengthen their negotiation power and therewith relieve hurdles that can not be relieved by one municipality (Opportunities and Threats-Analysis).

Because of the targets set for the hurdles analysis to give municipalities a feasible tool to support the identification of their hurdles as well as to give them a first impression on the hurdles, a first clue to where they are standing and some strategic suggestions three simple methods for assessing and visualizing the hurdles were chosen. Municipalities should be able to use them by themselves if repeating the self-evaluation of their hurdles and therewith compare their results on their own successfully after a period of time. The chosen methods serve as visualization instruments for the results of each municipality to give them discussion base and comparing abilities for repeated appliance. Because of the different structures of municipalities and connected with that differing procurement processes and numbers of participants in the hurdles analysis representativeness between the results of varying municipalities isn’t given. Nevertheless the usability
of the assessing method (within one municipality) based on averages, spreads and deviation is scientifically proofed, because RÖHRMANN worked out that those assessing methods are reliable for cardinal data too under the assumption that the data is equidistant.\footnote{Cf. RÖHRMANN, B. (1978), pp. 227.} This requirement is fulfilled by the conception of the questionnaire.

For visualizing hurdles and their relevance for municipalities three different method were chosen. They shall assist them in getting a first clue where to start with\footnote{Because of the hitherto case study character and related to the resulting small number of interviewees the results of the survey are not yet representative. Objective of the hurdles analysis however was to identify the municipalities’ hurdles, give them first thought-provoking impulses and possibly initiate further analyses of their hurdles as well as generate strategies to handle those. In the authors opinion this objective can be reached with the chosen methods.} and afterwards possibly to decide whether to have a deeper analysis of the identified hurdles and to generate strategies for overcoming.

**Assessing method 1 – the hurdles profile**

This assessing method uses the averages and spreads to point out tendencies for probably existing hurdles of a municipality and to evaluate their relevance (see figure 8).

![figure 8: hurdles profile of a municipality](image)

Cognitions that can be achieved by using this assessing method are knowledge of:

- whether potential hurdles are perceived as hurdles (the higher the average is the bigger is the perceived hurdle) as well as
- whether different views do exist about hurdles (the bigger the spread is the more different is the perception of a hurdle within a municipality).

Results aimed at with this analysis are to point out first trends (e.g. all interviewees perceive one hurdle almost identically) and to identify starting points for the assessment of causes for hurdles (e.g. strongly differing views on hurdles implicate to have to look for the reasons).

**Assessing method 2 – The hurdles portfolio**

This second method is based on the averages and spreads of the data collected. It classifies the hurdles to derive first strategies for overcoming (see figure 9).
A result of this method might be a description of existing, non-existing and no longer existing hurdles respectively. They will show in the fields of “Decision Analysis” and “Best Practice Sharing”. An illustration of the differences in the perception of hurdles is possible as well in the field of the “Problem Analysis”.

By using the Portfolio a catalogue with first proposals for potential actions can be derived. It can be used to decide what to do first - overcoming the hurdles, knowledge transfer or in-depth analysis.

**Assessing method 3 - The hurdles matrix**

This method uses the theoretical hurdles matrix that includes all so far detected possible hurdles and the averages to visualize as well the location of hurdles within the municipality as their relevance for it either (see figure 10).

The hurdles matrix shows the allocation of the hurdles to the decision process and the actors within it and maps the hurdles’ relevance. Therewith the following questions can be answered:

- Which hurdles are relevant for which actor?
- In which element of the decision process do hurdles exist?

The results can be seen in a visualisation of the relevant hurdles to define responsibilities and generate strategies.
The aim of assessing the relevance of hurdles as explained already is to show possible approaches to relieve them. Therefore the perceived potential influence and the perceived efforts of the actors have to be examined.

3.4 Analysing assessed hurdles by a structured interview

The second step of the analysis can be interviews based on the questionnaires. They should deepen and clarify the knowledge about the hurdle situation of the municipality (by personal interviews, by mail and/or by telephone). The aim of these interviews should be:

- to reconstruct the process of implementation of green procurement,
- to understand the internal decision process,
- to investigate the individual view of the interview partners,
- to initiate a self-assessment of the interview partners,
- to specify contradictions and
- to clarify open questions.

Due to this aim the analysis combines the individual perceptions of the actors with the external view of the analyst.

The interviews are not standardised, but structured to give the possibility to follow the core competencies of the interview partner and not to restrict them. They follow the structure of the questionnaire. Additionally an interview guide can be used. It may contain the following aspects:

1. work area and responsibilities,
2. development of green procurement in the municipality,
3. personal role in the process and motivation,
4. role, aims and responsibilities of other actors: political decision-makers, management and officials in charge of different areas (procurement department, environmental department, financial department),
5. interplay of actors,
6. reactions of users and citizens,
7. reaction of suppliers and market situation,
8. green products (including examples),
9. way of determination of environmental criteria,
10. information sources,
11. legal aspects,
12. controlling and evaluation of implementation of green procurement,
13. needs for further improvement (hurdles).

4 The development of the method from the first implementation to the self-evaluation tool

The following chapter is dealing with the development steps of the hurdles analysis and connected with that its hitherto accomplished implementations and improvements.

The first part will be about the development of the method in the RELIEF project. The first questionnaire for assessing hurdles in the procurement process was developed in the context of this project. It was tested in the project participating municipalities. Based on theoretical studies done beforehand and the results of this survey in the municipalities a first hurdles matrix was

49 For advantages and disadvantages of this data collection method see SCHNELL, R.; HILL, P. B.; ESSER, E. (1999), pp. 297.
50 RELIEF is a European research project. The title means "RELIEF - Environmental relief potential of urban action on avoidance and detoxification of waste streams through green public procurement". For further information about the project please visit the project homepage www.iclei.org/ecoprocura/relief/ or have a look at the latest publication of results from within the project, see ERDMENGER, C. (ED.) (2003).
51 With the hurdles matrix possible hurdles are matched to the procurement process as well as to the actors within this process to make it easier to generate strategies when assessing perceived hurdles in a municipality.
rendered. Afterwards the case study of NaBesI is presented. The accomplishment of another case study like hurdles analysis in context of the NaBesI project led to a further improvement of the questionnaire. In the further progress a questioning of employees of three English municipalities accomplished by Mr. Helmut Lusser (Global to Local Ltd.), resulted in further analyses as well as in an improvement of the questionnaire and the revision and completion of the hurdles matrix (prototype II).

4.1 Analysis of the results of the hurdles analysis within the RELIEF project

4.1.1 The development of the method (theoretically)

During the RELIEF project a first scheme for a hurdles catalogue was developed (therefore see figure 11) based on theoretical studies about hurdles and the assumption that every actor and every step within the procurement process might cause them (see chapter 2.2). The results were used as basis for the development of the first questionnaire that was tested in the participating RELIEF municipalities and afterwards modified due to experiences and results out of the questioning. After interviews in these municipalities to get more detailed information first conclusions about perceived hurdles were possible and the first hurdles matrix was filled and improved (see figure 12).

<table>
<thead>
<tr>
<th>Figure 11: First hurdles catalogue - list of potential hurdles for green procurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Efforts for the further implementation of green procurement are useful. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>2. Procurement of environmentally friendly products and services is an aim of my local authority. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>3. There are different views at several decision levels of my local authority concerning the inclusion of environmental criteria in the field of public procurement.</td>
</tr>
<tr>
<td>4. I am sufficiently informed about the aim of green procurement. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>5. I am sufficiently informed about the possibilities to implement green procurement. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>6. There are sufficient possibilities to include environmental criteria in procurement decisions in my local authority. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>7. Existing procurement guidelines do support the inclusion of environmental criteria in procurement decisions in a sufficient way. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>8. Given possibilities to include environmental criteria are widely used in my local authority. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>9. There are uncertainties concerning the legal position on inclusion of environmental criteria.</td>
</tr>
<tr>
<td>10. The applicable law concerning the inclusion of environmental criteria is very complex.</td>
</tr>
<tr>
<td>11. Given legal framework prevents the inclusion of environmental criteria in procurement decisions.</td>
</tr>
<tr>
<td>12. I am sufficiently informed about the environmental relevance of products and services. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>13. I am sufficiently informed about environmentally friendly products and service alternatives. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>14. It is difficult to identify environmentally friendly products and services within the procurement market. (Hurdle, if not supported)</td>
</tr>
<tr>
<td>15. There are sufficient environmentally friendly products and service alternatives available within the procurement market.</td>
</tr>
<tr>
<td>16. Environmentally friendly products and services are too expensive.</td>
</tr>
<tr>
<td>17. Environmentally friendly products have lower functionality compared to conventional products.</td>
</tr>
<tr>
<td>18. Many users have prejudices concerning environmentally friendly products and service alternatives.</td>
</tr>
<tr>
<td>19. Green procurement is obstructed by the administrative processes (e.g. due to spread competences).</td>
</tr>
<tr>
<td>20. The inclusion of environmental criteria in procurement decisions causes additional work.</td>
</tr>
<tr>
<td>21. Follow-up costs (e.g. energy and disposal costs) are not included in procurement decisions.</td>
</tr>
<tr>
<td>22. Higher demand for environmentally friendly products and service alternatives by users within the local authority is a premise for more environmental procurement.</td>
</tr>
</tbody>
</table>

For continuative information about the general concept of the hurdles analysis see GÜNTHER, E. (2003), p. 30-50. For the first hurdles matrix structured following the idea of the decision process and the actors in this decision process see appendix figure 12, p. 20.

NaBesI stands for „Potentiale nachhaltiger Beschaffung und Instrumente zur Umsetzung“ (potentials of sustainable procurement and instruments for the implementation). For further information see www.tu-dresden.de/wwwbwlbu/forschung/laufende_projekte/nachhaltig_beschaffen/en/


See appendix chapter 4.3 and figure 25.

For the latest version of the questionnaire that includes all improvements see appendix, chapter 7.2, p. 38.

For further information about the general concept of the hurdles analysis see GÜNTHER, E. (2003), p. 30-50.
4.1.2 First results of the hurdles analysis

In the following three examples for accomplishing the hurdles analysis in the project participating cities shall be presented. The municipalities are named A, B and C to keep their identities unknown.

The presenting procedure will be:

- a) Starting Point – where the general starting point of the municipality is described (its state of the art regarding green procurement).
- b) Questionnaire – where the results of the assessment of the questionnaires are shown and explained and
- c) Interviews – where the results from the interviews are summarised.

The participants within this first hurdles analysis were thereby selected by the representatives of the municipality within the RELIEF project. They represented the different departments and hierarchy levels of the municipality.

4.1.2.1 Analysis of the relevance of hurdles in the Municipality A

a) Starting point

Starting off in 1994, the green purchasing policy for Municipality A was confirmed by the city council in 1998. The goal is, to integrate environmental questions in all calls for tender by 2002. As that process is already launched, outsiders might ask, why Municipality A dedicates intensive efforts to green procurement within the RELIEF-project? Actors of the Municipality A instance three main reasons:

- The legal situation, especially on the EU level, is uncertain, complex and even preventing. Question like “Is it aloud to use environmental standards of the companies as a criteria? Is it possible to take into consideration the impacts of transportation? To what extent the criteria for labels can be used in calls for tenders?” arose. A better insight into the legal framework is needed.
- At the beginning of green procurement a lack of knowledge and information about criteria for selecting products and services was the crucial hurdle. Now it changed to a uncertainty how to measure the results of green procurement as far as possible.
- Many politicians ask: “Does green procurement lead to higher costs?”. There is no final answer yet.
That means on the one hand Municipality A already took more steps than a lot of other municipalities, but on the other hand there are still steps ahead as well as unanswered questions.

For accomplishing the hurdles analysis one politician and three employees of the Municipality A shared their perception of hurdles.

b) Questionnaire

The questionnaire showed the following average and spread of the perceived relevance:

![Hurdles Profile for Municipality A](image1)

**Further results** of the analysis of the questionnaires were:

- Every interview partner knows the procurement guidelines. Whether every employee knows them and how that level can be maintained has to be checked.

- The existing scope for green procurement should be extended. The given scope is not estimated to be sufficient.

- The comparison of the possible influence and the actual efforts of the actors ends up in one interesting result: The influence of the EU is appraised very high, whereas its efforts are appraised relatively low.

- Concerning financial consequences of green procurement no consequences or cost savings are expected.

![Hurdles Matrix for Municipality A](image2)
The matching of the hurdles to the decision process and the actors within the procurement process shows the following result.

![figure 15: hurdles matrix for Municipality A – matching the hurdles to the decision process and the actors within it](image)

c) Interviews

The following points describe the interplay of the different actors in Municipality A revealed by the analysis of the interviews.

1. Despite the actually strong political support to green procurement changes in the political arena, e.g. after elections or due to higher costs for green procurement in the future, could negatively influence the actual comfortable situation. That’s why it is an essential challenge for the promoters of green procurement in Municipality A to avoid higher cost. This leads to the statement, that success in green procurement depends strongly on persons with motivation for environmental protection. The responsibility for green procurement has to be accepted permanently on a high organizational level. Further on the still not sufficient organizational regulation concerning green procurement should be improved.

2. Among the five hurdles perceived as the most relevant, three deal with the legal situation of the Municipality A. The law is estimated to be very complex, uncertain and even preventing green procurement. Especially EU-regulations are a hurdle, Municipality A has always to be aware not to exceed the legal limits. Decision makers expect the new interpretative paper to fix legal limits and to increase decision certitude. Moreover possibilities for influencing the legal situation have to be figured out. The wish to extent the given scope could also be caused by an information hurdle.

3. Every innovation causes additional work. That hurdle is the classical reason for implementation gaps. On the national level uncertainties could be reduced by harmonizing environmental criteria. Things could be made easier for cities and suppliers by avoiding confusion due to different questionnaires. Moreover the number of green products available is not as high as expected. Finding green alternatives also causes more work. Actually an excellent cooperation between procurement and environmental department based on good relations between actors enables a effective division of labor. So environmental criteria in calls for tender are developed by the environmental department.

4. Otherwise the procurement department can decide on the weighting of these criteria. Here a stronger relation between selection of environmental criteria and their weighting is desired. The environmental department wants to increase the importance of environmental as-
cepts, because their weighting determines definitively the strength of impacts of green procurement.

5. The evaluation of the impacts of green procurement is another important challenge to go further. Related to this is the need for deeper knowledge about the environmental impacts of different product and service alternatives. This couldn’t be satisfied yet.

6. It has to be figured out how existing prejudices of the users can be relieved. New things create opposition. Making experiments may reduce the scope for green procurement, because flops make it even more difficult in the future to convince the users. Even if they only can choose their product from a range of alternatives determined by the central procurement department, prejudices should not be underestimated. For instance some users started complaining because of green procurement, they don’t want to accept changes.

7. Higher demand for environmentally friendly product and service alternatives by users within the local authority is a premise for the development of an adequate market. Municipality A is a substantial purchaser and has a high impact on the environment. Moreover it is necessary to set examples for the citizens and the industry. Increasing demand can improve production processes.

4.1.2.2 Analysis of the relevance of hurdles in the Municipality B

a) Starting point

Currently the Municipality B is introducing an environmental management system according to EMAS. An environmental program as one part of the whole management system is already existing. The first steps taken towards green procurement are an integrated part of the environmental program. What are the most important reasons to dedicate intensive efforts to green procurement within the RELIEF project? Actors of the Municipality B instance the following main reasons:

• Not every politician and employee of Municipality B is convinced by the idea of green procurement. Therefore it is important to communicate the relevance and the possibilities in a clear way.

• One aim of the participation of Municipality B in the RELIEF project is to get access to best practices for green procurement from other cities.

• Green alternatives are too expensive and therefore still not relevant for public procurement. Participating in an international project might improve the image of green procurement within the Municipality.

Municipality B already took some important steps, but there are still many steps ahead. Municipality B has to be analyzed under the specific conditions of a transitional economy. This restricts the possibilities of the Municipality B compared to other RELIEF cities.

Twelve employees of the Municipality B shared their perception of hurdles within the hurdles analysis.
b) Questionnaire

The questionnaire showed the following order of perceived relevance:

![Hurdles Profile for Municipality B](image)

**figure 16: hurdles profile for Municipality B**

**Further results** of the analysis of the questionnaires:

- Not every interview partner knew whether procurement guidelines exist. The answers given spread from “no” over “I don’t know” to “yes”. Apparently there is an information hurdle in the diffusion of the guidelines or also an acceptance hurdle.
- The existing scope for green procurement should be used in a better way. To extend the scope is not that relevant.
- The comparison of the possible influence and the actual efforts of the actors ends up in two interesting results: The influence and the efforts of the political decision makers is appraised very high. The actual efforts of the finance and the procurement department are perceived to be low.
- Concerning financial consequences of green procurement cost savings are strongly expected.

![Hurdles Matrix for Municipality B](image)

**figure 17: hurdles matrix for Municipality B**

The matching of the hurdles to the decision process and the actors within the procurement process shows the following result.
The following points describe the interplay of different actors in the local authority of Municipality B revealed by the analysis of the interviews.

1. Green procurement does not play an outstanding role in the activities of the local authority of Municipality B yet. Existing green products are perceived to be too expensive and limited budgets are a main hurdle for green procurement. The city should therefore first of all concentrate on measures that either help saving costs or have no consequences on the financial situation. Moreover any measure that supports reducing the consumption of products will improve the economic position.

2. Besides the major hurdle “lack of money” due to the difficult economic situation in the country in question the amount of products and services procured is not that huge. Activities have to be seen as preparation for future possibilities as explained above. In that way the opinion has to be understood, that green procurement is the “cream of the crop” after having solved problems to operate the city.

3. The opinion of the mayor is commonly the decisive factor in procurement. Without his orders there is a very little scope for green procurement. Due to his announced priority to buy as cheap as possible other actors do not see an extension of the scope for green procurement. The integration of green procurement activities into the EMAS process seems to be a way to strengthen the position of green procurement in the long-run.

4. There are three information hurdles among the first six hurdles specified by the analysis of the questionnaires as to be the most relevant: Decision makers, employees and citizens are not sufficiently informed about the possibilities to implement green procurement. The environmental relevance of products and services is not known and people in the city are not informed about green alternatives existing already. It is said, that the municipality has information on environmentally friendly products and services, but only a selective one. So intensive efforts should be dedicated to establishing an efficient information policy. Measures to achieve that goal could be of different provenience:

- As an environmental protection report exists already it could be used as a powerful instrument to relieve information hurdles.
- Workshops could be set up to multiply the idea and planned steps of green procurement. Some months ago the environmental department organized a meeting on “the environmentally friendly office” to provide general information on green procurement to the pro-

---

**Figure 18: hurdles matrix for Municipality B – matching the hurdles to the decision process and the actors within it**

c) Interviews
The Hurdles Analysis

26

• The implementation of an environmental management system along EMAS requires the information of the employees as it does require the information of the public. The measures taken therefore could be used to add information on green procurement.

• So far the Municipal Public Procurement Order does not contain any environmental request. Even if it is difficult to integrate environmental objectives, it has to be examined whether that order would be a suitable way to promote green procurement.

Only a whole bunch of information tools can provide a fertile basis for the prosperous development of green procurement in Municipality B.

5. It is noticed that no green products are available. At the time being green procurement requires long distance transports. They are not environmentally friendly on the one hand and produce higher costs on the other. A better availability of greener products is important for the development of a green procurement market. Actually a green market is developing in the country in question, but more on the level of private consumption. It is also possible that the current suppliers can not provide desired products. A market survey can reveal other possibilities. It has also to be examined whether a centralized or a decentralized procurement leads to better results.

4.1.2.3 Analysis of the relevance of hurdles in the Municipality C

a) Starting point

The environmental department of the Municipality C started a project for “Environmental Procurement” in 1987. After intensive activities and good results in the beginning the intensity decreased. Later on green procurement was integrated in the implementation process of an environmental management system. The council of Municipality C decided to introduce environmental management systems on the level of the different offices. Meanwhile the first units have certified management systems. That is a very good starting point for further developing green procurement. Nevertheless the actors in Municipality C mention some reasons, why there are intensive efforts within the RELIEF-project:

• Environmental products cause more work. The reason therefore are not only the criteria, that have to be selected, but also the intensive market analysis.

• Sometimes it is difficult to change traditional thinking.

• It is not clear how criteria for environmental procurement can be integrated in awards.

The experiences with green procurement and environmental management systems stress how important implementation is.

Eight employees of the Municipality C shared their perception of hurdles
b) Questionnaire

The questionnaire showed the following average and spread of the perceived relevance:

![Figure 19: Hurdles profile for Municipality C](image)

Further results of the analysis of the questionnaires were:

- Not everyone knows that there exist guidelines for green procurement. The different answers were “yes”, “I don’t know” and “no”.
- The existing scope for green procurement should be used in a better way. To extend the scope is not that relevant.
- The comparison of the possible influence and the actual efforts of the actors ends up in an interesting result: The potential influence of the finance department is appraised very high, whereas their efforts are appraised low.

![Figure 20: Hurdles matrix for Municipality C](image)

The matching of the hurdles to the decision process and the actors within the procurement process shows the following result.
The following chapter describes the interplay of different actors in the local authority of Municipality C revealed mainly by the analysis of the interviews.

1. Green procurement was not implemented like expected. Success factors for the future development can be based on the reasons for the failure.

2. Political impulses and the support of the executives are very important for green procurement in Municipality C. Examples exist which show that environmental targets can be pursued together with fulfilling city tasks. Spatial management and environmental management are combined in a perfect manner. Not all actors are aware of their task as promoters. As the importance of environmental protection decreased, green procurement is not that attractive for politicians anymore.

3. User orientation, like for sport facilities, restrict green procurement sometimes. Lack of functionality perceived by the users and the importance of the price restrict the potential demand furthermore.

4. Procurer have to compete against the free market, like for office equipment. That might lead to the situation that articles have to be removed from the catalogue. If you take into consideration that the market analysis is more expensive, with the exception of standardised products, there is no real incentive for green procurement for the procurers.

5. Financial resources are restricting environmental management in general and green procurement in special, too. Follow-up costs are not considered sufficiently, but they could help to identify economic advantages.

6. Quantity and quality of existing products can be restricting. The market is not transparent enough, as catalogues often do not mention environmental aspects at all. The question did arise whether the market for environmental products decreased or environmental criteria are already respected in traditional products.

7. To develop criteria is not perceived to be a problem. But to hold the information level is a problem. E.g., a list for detergents was not updated due to the expenses and therefore it is not used anymore. There is uncertainty how criteria can be integrated in awards in order to justify decisions. Moreover the legal situation is perceived to be unclear. But one reason can just be a lack of experience. Routine might help.
8. As there are not enough unambiguous scientific results for the environmental impact of products, many actors feel insecure. The department for environment can not give enough support so far. Environmental products require more data to destroy prejudices concerning lack of functionality or worse quality.

9. So far information is spread by a newsletter and discussions. A network could decrease the expenses for gathering information.

10. Central procurement bundling demand could be more powerful. In general, more decentralisation leads to less environmental orientation. Central procurement has to be evaluated from the economic and the political point of view. As obvious steps for green procurement are already made, the more difficult steps have to be pursued next.

4.1.3 Cognitions from the first application

Already the first assessment of results of the hurdles analysis of the RELIEF municipalities made clear, that different hurdles exist in different municipalities and the hurdles were perceived differently respectively. Consequently it seems unlikely that a universally valid strategy for overcoming the identified hurdles can be developed. In fact an individual strategy for every municipality seems necessary. E.g. best practice sharing is a possibility. Therefore municipalities having overcome certain hurdles can help others by explaining their approaches to overcome and their experiences while overcoming those hurdles so the others can use these to relieve their hurdles either.

4.2 The case study in the project NaBesI

4.2.1 The further development of the method (theoretically)

In line with the research for the project NaBesI a hurdles analysis was carried out based on the questionnaire developed and the experiences gained in the RELIEF project. The results of this analysis led to further knowledge about hurdles and the use of the assessing methods (described in chapter 3.3.2) as well as the analysis in general.

4.2.2 Results of that case study like hurdles analysis (Analysis in the Municipality D)

a) Starting point

The Municipality D has been considering environmental aspects in the procurement process since 1985. Procurement decision-makers give priority to environmentally friendly alternatives. Self-motivated employees support that process. If less environmentally oriented alternatives ought to be procured, an explanation has to be attached. Even if the price is higher, environmentally friendly alternatives can be chosen. This creates a culture and gives the certainty to the employees that green procurement should be the normal way to procure products and services. This is a perfect starting point demonstrated by many examples. For outsiders the question arises, why Municipality D dedicates intensive efforts to “green procurement” within the NaBesI project. The actors of the Municipality D mention the following reasons:

- Municipality D sets a good example with its long tradition of green procurement. Despite the wide-spread opinion that the level of green procurement is high, uncertainties exist concerning the status quo of green procurement. Therefore the status quo has to be recorded before green procurement can be intensified.

- Moreover a common knowledge base is aimed at.

Eight employees of the Municipality D shared their perception of hurdles.

58 NaBesI stands for “Nachhaltig Beschaffen - Potentiale Nachhaltiger Beschaffung und Instrumente zu ihrer Umsetzung”. This BMBF financed research project focuses on green public procurement and deals with the question why it does not work sufficiently until now. Therefore it surveys perceived hurdles as well as hurdles that really exist, e. g. because of legal framework or missing green alternatives. For further information about the project see www.tu-dresden.de/wwbwlbu/forschung/laufende_proekte/nachhaltig_beschaffen/.
b) Questionnaire

The questionnaire showed the following average and spread of the perceived relevance:

![Hurdles Profile for Municipality D](image1)

**Further results** of the analysis of the questionnaires were:

- Every interview partner knows the guidelines for green procurement. Whether every employee knows them and how that level can be maintained has to be checked.
- The existing scope for green procurement should be used in a better way. To extend the scope is not that relevant.
- The comparison of the possible influence and the actual efforts of the actors ends up in two interesting results: The influence of the political decision makers is appraised very high, whereas their efforts are appraised low. The possible influence and the actual efforts of the environmental and the finance department are appraised equally.

![Hurdles Matrix for Municipality D](image2)

The matching of the hurdles to the decision process and the actors within the procurement process shows the following result.
c) Interviews

The following points describe the interplay of different actors in Municipality D. It was revealed mainly by the analysis of the interviews.

1. **Different views within the local authority of Municipality D are a major hurdle perceived.** Relieving this hurdle means involving all decision makers and that can become difficult. But the efforts are not promising, if that hurdle persists comprehensively. It also has to be examined whether the hurdles are systematically allocated to the other actors.

2. **As mentioned before responsible decision-makers on political and administrative level give high priority to green procurement.** E.g. the availability of green alternatives is checked regularly. Such kind of personal support is necessary because programs themselves are not sufficient. Also in case of higher cost, especially of construction projects, political signals are essential. Decision-makers should not undervalue the importance of commitment and the role of procurers in green procurement.

3. **Last fact contributed to a distinguished picture on the role of the officials in charge for procurement.** They have in-depth experiences and knowledge about products and services as well as environmental aspects to realise green procurement. Mainly centralised procurement procedures (with shared procurement responsibilities, i.e. different procurement units are responsible for defined product group) support this situation. Their perception of the high level of green procurement is based on a lot of successful examples. A wide-spread opinion among procurers and the appropriate organizational culture is not sufficient. The level of green procurement depends strongly on individual motivation of the officials in charge even because there are no individual benefits for commitment.

4. **Particularly the environmental department of the Municipality D requires to reduce uncertainties of the status quo of green procurement.** Many departments are responsible for procurement. An adequate information system could improve the informal information exchange within the group of procurers as well as between procurers and other actors like the environmental department and provide a common knowledge base. Here the environmental department might possibly play a stronger role to coordinate and assess regularly the status quo of the whole municipality. Although such steps create a stronger institutional fundament to keep the high level and to set manageable goals for intensifying green procurement, not all actors are sure of this necessity.

5. **Information has to be merged internally and externally, i.e. knowledge networks have to be built up.** Internally the target of e-procurement could meet that objective. On the one hand
that results in a decentralized procurement, on the other hand it allows to gather data and to strengthen the use of the product catalogue. Externally a network between municipalities can deliver up-to-date information. Moreover it can reduce the shortcomings by transporting feedback between the European Union and the local administration. There is still a gap between directives and procurement reality. Possibly clearer regulations help to increase safety in decision-making.

6. Identifying environmentally friendly alternatives can be very difficult. A lack of information on environmental impacts of alternatives complicates decision-making of procurers. Local authorities have to use external expert advice to set up criteria for procurement. This can relieve the hurdle “additional work” caused by green procurement. That hurdle is a classical reason for implementation gaps. Particularly with regard to the identified negotiation power of Municipality D the existing market should be exploited by using improved instruments for identifying products and services. Until that step is reached a market extension should be strived for.

7. The hurdle “environmentally friendly alternatives are too expensive” is in strong relation to decision-making, which is often unexamined. Suitable measures for a holistic evaluation have to be determined to take follow-up costs into account more adequately.

8. Higher demand for environmentally friendly product and service alternatives by users within the local authority is a premise for the development of an adequate market. The Municipality D is financially strong and can induce a lot. An example may illustrate that: an acquisition request to Daimler-Chrysler concerning eco-cars was linked with the information to buy Volvo-cars with natural gas drive. That led to an interim solution with bio-diesel drive, that should be replaced later on by natural gas. That example merely reinforces the potential negotiation power. Nevertheless Municipality D actors mentioned, that the scope of the local authority to test a wide range of new products to drive green markets is really limited. The use of negotiation power is more useful for green products which are already approved and provide same functionality like conventional products.

9. Otherwise it is difficult to convince users of the advantages of green procurement and green products and services. Sometimes those products have even a negative image. To avoid such a hurdle, procurers are often unwillingly to experiment with new green products. But if procurers are convinced by the quality of the product, they often avoid attracting attention to modified products. So they try to use the existing scope for green procurement in a better way. To extend the scope is not that relevant. Nevertheless it has to be figured out how existing prejudices of the users can be relieved. Even if the user can choose environmentally friendly products only, the effect of a prejudice should not be underestimated.

4.3 Further progress

In 2002 after analysing the answers of a questioning of the employees of three English municipalities, prototype II of the hurdles matrix was developed in cooperation with Global to local Ltd. Therefore the filled in questionnaires of the municipal participants of courses held about sustainable development etc. were assessed. The results were compared with the so far won findings and the questionnaire as well as the hurdles matrix were improved once more (see figure 25).

59 Further information at www.globaltolocal.com/indexuk.htm. The consultancy member Helmut Lusser was assessor from the EU in the RELIEF project.
4.4 Cognitions from working with the hurdles analysis

Based on the so far experiences with the hurdles analysis a thesis for the assessment and overcoming of hurdles for green procurement in municipalities was generated:

Because of the strongly different perception of relevant hurdles within the municipalities the ONE universally valid strategy for overcoming hurdles does not exist. The development of individual strategies going along with accompanying counselling is therefore necessary.

Because of the experiences collected while developing the hurdles analysis method together with the deduced thesis that resulted from the surveys done within this developing process (see above) and for giving the municipalities a feasible instrument for the analysis of their hurdles respectively it was decided to generate the self-evaluation tool. The latest improvements of the hurdles analysis method and the therewith gained experiences are building the basis for the tool to make sure that all findings are integrated in the upcoming analyses.

5 The self-evaluation tool for municipalities

The self-evaluation tool is based on the so far developed method of the hurdles analysis. It represents an approach with which municipalities should be enabled to identify perceived hurdles, key-persons and decision elements as well as fix responsibilities and try to generate solutions on their own.

5.1 Concept

<table>
<thead>
<tr>
<th>Steps</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td>Define who in the municipality should be involved in the self-evaluation process. <strong>The number of participants depends on the objectives the municipality has for the evaluation. Therefore, for example, only the actors at the operational level might be chosen or maybe a full questioning of the whole staff in the procurement process could be done.</strong></td>
</tr>
<tr>
<td>Step 2:</td>
<td>Are there any specific issues in the municipality’s procurement process? <strong>Are there specific legal conditions or a new organisational structure for the city council, which require the questionnaire to be adapted.</strong></td>
</tr>
</tbody>
</table>

After step 2 the preparations for the self-evaluation (number of participants, adaptation of the questionnaire) are finished.
| Step 3: Completing the questionnaire | The responsible person ensures that the participants take the self-evaluation seriously and fill in the questionnaire. |
| Step 4: Allocation of the assessment’s results to the five groups of hurdles<sup>60</sup> | Analysis of the questionnaires and matching the questions<sup>61</sup> to the effects (for this task the tool will provide suggestions). |

After Step 4 it should be possible to assess the relevance of the different groups of hurdles in the municipality:

| Step 5: Identification of key-persons in the procurement process of the municipality (perception) | Locate the actors who can influence the procurement process (e.g. finance department, procurement department, environmental department, users, etc.).<sup>62</sup> |
| Step 6: Identification of the elements of the procurement process where decisions are made. | For this step the decision-making process in the municipality has to be defined and described and the critical stages in procurement decisions have to be identified.<sup>63</sup> |
| Step 7: Conclusion: with whom and where hurdles lie within the municipality. | Adjustment/specification of the actors and process elements having an effect on the procurement decision. |

After Step 7 responsibilities/influencing factors for overcoming hurdles are identified:

| Step 8: Are there different perceptions of hurdles within the municipality? | Every actor in the decision process might have a different view about a hurdle. To be able to generate sensible strategies concerning the hurdles it is therefore important to assess the divergence between the answers.<sup>64</sup> |
| Step 9: Classification of hurdles and identification of possible strategies for overcoming them | Depending on the assessment of the hurdles, a first matching to possible strategies for overcoming them is done (e.g. Best Practice Sharing, Decision Analysis, Problem Analysis, Opportunities and Threat Analysis).<sup>65</sup> |
| Step 10: Who can, and where is it possible to, relieve hurdles? | Matching the hurdles to the procurement process and the actors within.<sup>66</sup> |

After Step 10 a first analysis of (existing) perceived hurdles, as well as some first strategies for handling these hurdles, is available:

| Step 11: Which hurdle to start with? | It is recommended to choose high priority hurdles to e.g. do real Best Practice Sharing with other municipalities or try to overcome the hurdle if possible. |
| Step 12: Identification of a critical (procurement) incident for a high priority hurdle | For this step interviews with every actor identified in Step 5 have to be accomplished. For the period in question every interviewed person shall give an extreme situation and a problem (critical incident) respectively. |
| Step 13: Identification of the “normal” (standard) situation of a (procurement) incident for the high priority hurdle | For this step interviews with every actor identified in Step 5 have to be accomplished as well. Every interviewed person should describe the normal (standard) procurement incident. |
| Step 14: Development of a detailed plan for strategies. | To implement those strategies in the decision-making process workshops with the people identified in Step 7 are helpful. |

The Result after Step 14 should be a detailed plan incorporating strategies for dealing with the identified hurdles.

---

<sup>60</sup> These hurdles groups correspond with those shown in figure 6: no aims, no regulations, no information, no knowledge, no incentive and sanction system. They are derived from the bases of power from FRENCH; RAVEN.

<sup>61</sup> See questionnaire, question 7, appendix chapter 7.2, pp. 38.

<sup>62</sup> See figure 4: actors in a procurement decision.

<sup>63</sup> See figure 1: decision process.

<sup>64</sup> Therefore the chosen assessing method (“hurdles profile”) analyses the averages and spreads between the answers, see chapter 3.3.2 as well as figure 8.

<sup>65</sup> For this purpose the “hurdles portfolio of a municipality” can be used, see figure 9 and chapter 3.3.2.

<sup>66</sup> Therefore the third alternative assessing method, the “hurdles matrix”, that not only allows making a statement about the allocation of the hurdles in the decision process but also about the relevance of those hurdles can come in operation, see chapter 3.3.2 as well as figure 10.
5.2 The online questionnaire

For a wider multiplication of the hurdles analysis in municipalities and for giving as many municipalities as possible the chance of carrying out such a self-evaluation of hurdles an online tool was developed. The conception of the self-evaluation tool is finished by now and the test phase has started. The procedure for the online self-evaluation follows the conceptual steps explained above. A first inside view into the tool is given by the following screenshots. They show the homepage of the hurdles analysis (figure 27) where the first registration will take place and further information will be sent to the interested local authority and the page for applying for the hurdles analysis (figure 28), where the number of participants, the time span etc is fixed. Afterwards the login is provided and the questioning can be started within the local authority.

![Figure 27: Registration for the hurdles analysis self-evaluation](image)

![Figure 28: Application for the hurdles analysis self-evaluation](image)
5.3 Cognitions from developing the self-evaluation tool

For interested municipalities the tool is available under: www.wwi.wiwi.tu-dresden.de/hurdles/. To accomplish such a hurdles analysis interested municipalities can apply for the online self-evaluation, fill in the questionnaire and get a first assessment of their hurdles by using the described methods. Those shall help them identify hurdles and generate strategies on their own in future.

6 Reflection and perspectives

The aim of the hurdles analysis was to identify existing hurdles for green public procurement and to develop a strategy how to overcome those hurdles. The result is a method consisting of a questionnaire and three types of assessing methods:

- average and spread of the perceived relevance of hurdles. For every hurdle the municipality can see the difference of perception and the position of the average.

- average and standard deviation of the perceived relevance of hurdles. This analysis is based on the $\mu/\sigma$-models applied in economic analyses. Depending on the position within the matrix, strategies for overcoming are suggested.

- matching the hurdles to the decision process and the driving forces. To relieve the hurdles, the relevant decision points and decision makers have to be identified (see 2.2). This is important to see the sequence of hurdles on the one hand and to assess responsibilities for the relieving on the other hand.

That should help municipalities doing a first assessment of their hurdles as well as developing first strategies to overcome the most relevant.

Resulting from the cognition that there won’t be the ONE universally valid strategy for overcoming hurdles because of to different perceptions of relevant hurdles and to enable municipalities to do an assessment of their hurdles on their own, a method for self-evaluation was developed and realised as an online tool. With this tool the municipalities can adapt the method to their needs and therewith generate strategies for handling hurdles individually.

One future objective of the hurdles analysis is to access this online self-evaluation tool to as many as possible municipalities after the test phase to enable them to assess their hurdles. This will be promoted (besides implementing the tool on the homepage of the Professorship of Environmental Management of TU Dresden) by linking the tool to the ICLEI Procura+ Campaign\textsuperscript{67} and therewith make it known all over Europe.

Furthermore based on experiences and further theoretical studies the hurdles analysis method and it’s assessing methods will be improved. One step will be to develop another assessing method that combines the different hurdles within the hurdles groups. The method will be based on the so called cobweb-diagram (see figure 29).

\textsuperscript{67} This Campaign is initiated as part of the RELIEF project and will be continued by ICLEI in the following.
Another future objective for the hurdles analysis might be seen in our research project “Green eBusiness - Assessment of the market penetration of green products based on a hurdles analysis (GeB)”. The aim of this project is on the one hand to identify existing hurdles for green procurement in German companies by using the described hurdles analysis method and on the other hand based on the results of that survey to derive requirements of eBusiness designs to be able to relieve those hurdles.  

---

68 For further information about the project see www.tu-dresden.de/wwbwlbu/forschung/laufende_projekte/green_ebusiness/en/
7 Appendix

7.1 Overview over existing eCommerce platforms for procurement as well as possible information sources concerning green procurement

<table>
<thead>
<tr>
<th>Existing eCommerce platforms</th>
<th>web pages concerning green procurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.beschaffen.de">www.beschaffen.de</a></td>
<td><a href="http://www.beschaffung-info.de">www.beschaffung-info.de</a></td>
</tr>
<tr>
<td><a href="http://www.beschaffung.de">www.beschaffung.de</a></td>
<td><a href="http://www.oekoeinkauf.at">www.oekoeinkauf.at</a></td>
</tr>
<tr>
<td><a href="http://www.beschaffungswelt.de">www.beschaffungswelt.de</a></td>
<td><a href="http://www.blauer-engel.de">www.blauer-engel.de</a></td>
</tr>
<tr>
<td><a href="http://www.e-vergabe.bund.de">http://www.e-vergabe.bund.de</a></td>
<td><a href="http://www.oekotest.de">www.oekotest.de</a></td>
</tr>
<tr>
<td><a href="http://www.allago.de">www.allago.de</a></td>
<td><a href="http://www.europa.eu.int/ecolabel">www.europa.eu.int/ecolabel</a></td>
</tr>
<tr>
<td><a href="http://www.AVACOMM.de">www.AVACOMM.de</a></td>
<td><a href="http://www.igoeh.ch">www.igoeh.ch</a></td>
</tr>
<tr>
<td><a href="http://www.atradapro.de">www.atradapro.de</a></td>
<td><a href="http://www.iclei.org/europe/ecoprocura/index.htm">www.iclei.org/europe/ecoprocura/index.htm</a></td>
</tr>
<tr>
<td><a href="http://www.chemifidence.com">www.chemifidence.com</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.ebay.de">www.ebay.de</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.intersource.de">www.intersource.de</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.ausschreibungs-abc.de">www.ausschreibungs-abc.de</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.wlw.de">www.wlw.de</a></td>
<td></td>
</tr>
</tbody>
</table>

*figure 30: eCommerce platforms and information sources*

7.2 Questionnaire for assessing hurdles in the procurement process in municipalities

1. What is your function in your municipality concerning procurement decisions?
   (Please mark with a cross!)
   - [ ] Local policy maker, e.g. city council
   - [ ] Administration of different areas of responsibility:
     - [ ] Procurement
     - [ ] Official in charge of procurement (purchaser)
     - [ ] Environment
     - [ ] Finance
     - [ ] Other: Please insert area of responsibility
   - [ ] User
   - [ ] Other: Please insert indication.

2. In your opinion, where in the entire decision process of the product and service procurement main decisions are made according to green procurement in your municipality? (Please mark with a cross, several crosses are possible.)
   - [ ] Guidelines of the European Union
   - [ ] Guidelines of the government of your country
   - [ ] Local policy maker, e.g. city council
   - [ ] Administration of different areas of responsibility:
     - [ ] Procurement
     - [ ] Official in charge of procurement (purchaser)
3. Which decision levels have **influence** to implement green procurement? (Please mark with a cross!)

<table>
<thead>
<tr>
<th></th>
<th>No influence</th>
<th>Low influence</th>
<th>Medium influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines of the European Union</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines of the government of your country</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local policymakers, e.g. city council</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration of different areas of responsibility:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official in charge of procurement (purchaser)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: Please insert area of responsibility.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: Please insert indication.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Which decision levels make **efforts** to implement green procurement? (Please mark with a cross!)

<table>
<thead>
<tr>
<th></th>
<th>No influence</th>
<th>Low influence</th>
<th>Medium influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines of the European Union</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines of the government of your country</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local policymakers, e.g. city council</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration of different areas of responsibility:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official in charge of procurement (purchaser)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: Please insert area of responsibility.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: Please insert indication.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. How do you rate your **own influence** to implement green procurement? (Please mark with a cross!)

<table>
<thead>
<tr>
<th>No influence</th>
<th>Low influence</th>
<th>Medium influence</th>
<th>High influence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Which influence have the following legal basic conditions of public procurement on green procurement? (Please mark with a cross. Several crosses are possible.)

<table>
<thead>
<tr>
<th>European Union Law</th>
<th>High influence</th>
<th>Medium influence</th>
<th>Low influence</th>
<th>No influence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competition Law</th>
<th>High influence</th>
<th>Medium influence</th>
<th>Low influence</th>
<th>No influence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Budget regulations</th>
<th>High influence</th>
<th>Medium influence</th>
<th>Low influence</th>
<th>No influence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General terms and conditions applicable to contracts</th>
<th>High influence</th>
<th>Medium influence</th>
<th>Low influence</th>
<th>No influence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*other: Please insert indication.*

<table>
<thead>
<tr>
<th></th>
<th>High influence</th>
<th>Medium influence</th>
<th>Low influence</th>
<th>No influence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Please give your evaluation to the following statements: (Please mark with a cross!)

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>I do not agree</th>
<th>I rather do not agree</th>
<th>I rather agree</th>
<th>I agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efforts for green procurement are useful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am sufficiently informed about the aim of green procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green procurement is one of the aims of my municipality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is this aim fixed in guidelines for green procurement?</td>
<td>Yes</td>
<td>No</td>
<td>I don’t know</td>
<td></td>
</tr>
<tr>
<td>The procurement guidelines of my municipality support green procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Given possibilities to include environmental criteria are widely used in my municipality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are different views at several decision levels of my municipality concerning green procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are uncertainties concerning the legal position of green procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The applicable law concerning green procurement is very complex.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The existing legal framework prevents green procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am informed about the environmental relevance of products and services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am informed about the possibilities of green procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am informed about green product and service alternatives.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It is difficult to identify green products and services within the procurement market.

Many users have prejudices concerning green product and service alternatives.

Green procurement is obstructed by the administration processes (e.g. due to spread competences).

Follow-up costs (e.g. energy or disposal costs) are not included in procurement decisions.

Green products have a lower functionality compared to conventional products.

Higher demand for green product and service alternatives by users within the municipality is a premise for more green procurement.

Green products and services are too expensive.

Green procurement causes additional work.

Green procurement opens up opportunities for cost savings.

Green procurement causes cost increases.

There are sufficient possibilities for green procurement in my municipality.

There are sufficient green product and service alternatives available within the procurement market.

For further implementation it is important to extend given scope for green procurement.

For further implementation it is important to use the given scope in a better way.

Thank you very much!
8 References


